

(54) Title: MATERIAL FABRICATION

(57) Abstract

The present invention provides: (i) a method of and apparatus for depositing material, preferably a film, on a substrate, the method comprising the steps of: providing a substrate; heating the substrate (5); generating an aerosol comprising droplets of a material solution; providing a nozzle unit (11) for delivering the aerosol to the substrate, the nozzle unit including at least one outlet (18) through which a directed flow of the aerosol is delivered and at least one electrode (21); charging the aerosol droplets with a positive or negative charge; providing a flow of the aerosol through the nozzle unit so as to deliver a directed flow of the aerosol from the at least one outlet; and generating an electric field between the substrate and the at least one electrode such that the directed aerosol flow is attracted towards the substrate; and (ii) a method of and apparatus for fabricating a powder, preferably an ultrafine powder, the method comprising the above steps but where the aerosol droplets react homogeneously in the gas phase to form a powder.